

**CLAIMS**

1. A network protector comprising:
  - node connecting means for connecting the network protector to a node in an electronic network;
  - hub connecting means for connecting the network protector to a hub in the electronic network; and
  - a non-earthed surge protection circuit for allowing electronic communication between the node connecting means and the hub connecting means, the surge protection circuit including circuit breaking means for disrupting electronic communication between the node connecting means and the hub connecting means upon a surge exceeding a predetermined magnitude being received by the surge protection circuit.
2. A network protector according to claim 1 wherein the node connecting means and the hub connecting means are RJ9, RJ11 or RJ45 connectors.
3. A network protector according to claim 2 wherein the node connecting means comprises an RJ45 connector for connecting with network wiring from a network port of a node.
4. A network protector according to claim 3 wherein the hub connecting means comprises an RJ45 connector for connecting to an RJ45 connector of a network hub.
5. A network protector according to claim 4 wherein the surge protection circuit comprises a first circuit having a first leg which connects contact position one of the RJ45 hub connector with contact position one of the RJ45 node connector as well as a

- second leg which connects contact position two of the RJ45 hub connector with contact position two of the RJ45 node connector.
6. A network protector according to claim 5 wherein a first circuit breaking means is provided between the first and the second leg of the first circuit.
  7. A network protector according to claim 6 wherein the circuit breaking means is formed by having a resistor in the first and second leg and a capacitor connected between the legs such that upon receiving an electrical surge exceeding a predetermined value either the capacitor or the resistors will be destroyed thereby disrupting any electronic communication between the node and the hub.
  8. A network protector according to any one of claims 5 to 7 wherein the surge protection circuit comprises a second circuit having a first leg which connects contact position three of the RJ45 hub connector with contact position three of the RJ45 node connector socket as well as a second leg which connects contact position six of the RJ45 hub connector with contact position six of the RJ45 node connector.
  9. A network protector according to claim 8 wherein a second circuit breaking means is provided between the first and the second leg of the second circuit.
  10. A network protector according to claim 9 wherein the second circuit breaking means is formed by having a resistor in the first and second leg of the second circuit and a capacitor connected between these legs such that upon receiving an electrical surge exceeding a predetermined value either the capacitor or the resistors will be destroyed thereby disrupting any electronic communication between the node and the hub.

11. A network protector according to claim 4 wherein the surge protection circuit comprises a first leg which connects contact position one of the RJ45 hub connector with contact position one of the RJ45 node connector, a second leg which connects contact position two of the RJ45 hub connector with contact position two of the RJ45 node connector, a third leg which connects contact position three of the RJ45 hub connector with contact position three of the RJ45 node connector as well as a fourth leg which connects contact position six of the RJ45 hub connector with contact position six of the RJ45 node connector.
12. A network protector according to claim 11 wherein each leg includes circuit breaking means which will be destroyed upon receiving an electrical surge exceeding a predetermined value thereby disrupting any electronic communication between the node and the hub.
13. A network protector according to claim 12 wherein the circuit breaking means are resistors.
14. A network protector according to claim 13 wherein the resistors are 100 ohm 0.25 Watt resistors with a 10% variance.
15. A network protector according to claim 4 wherein the surge protection circuit comprises a first leg which connects contact position three of the RJ45 hub connector with contact position three of the RJ45 node connector, a second leg which connects contact position six of the RJ45 hub connector with contact position six of the RJ45 node connector, a third leg which connects contact position seven of the RJ45 hub connector with contact position seven of the RJ45 node connector as well as a fourth leg which connects contact position eight of the RJ45 hub connector with contact position eight of the RJ45 node connector.

16. A network protector according to claim 4 wherein the surge protection circuit comprises a first leg which connects contact position one of the RJ45 hub connector with contact position one of the RJ45 node connector, a second leg which connects contact position two of the RJ45 hub connector with contact position two of the RJ45 node connector, a third leg which connects contact position four of the RJ45 hub connector with contact position four of the RJ45 node connector as well as a fourth leg which connects contact position five of the RJ45 hub connector with contact position five of the RJ45 node connector.
17. A network protector according to claim 4 wherein the surge protection circuit comprises eight legs wherein each contact position of the RJ45 hub connector is connected with its corresponding contact position of the RJ45 node connector.
18. A network protector according to any one of claims 15 to 17 wherein each leg includes circuit breaking means which will be destroyed upon receiving an electrical surge exceeding a predetermined value thereby disrupting any electronic communication between the node and the hub.
19. A network protector according to claim 18 wherein the resistors are 100 ohm 0.25 Watt resistors with a 10% variance.
20. A network protector according to claim 4 wherein the surge protection circuit comprises a first leg which connects contact position three of the RJ45 hub connector with contact position three of the RJ45 node protector, a second leg which connects contact position four of the RJ45 hub connector with contact position four of the RJ45 node connector, a third leg which connects contact position five of the RJ45 hub connector with contact position five of the RJ45 node connector as well as a fourth leg which connects

contact position six of the RJ45 hub connector with contact position six of the RJ45 node connector.

21. A network protector according to claim 20 wherein the surge protection circuit includes that the first and fourth legs are connected with a leg having a resistor.
22. A network protector according to either claim 20 or claim 21 wherein the surge protection circuit includes that the second and third legs are connected with a leg having a resistor.
23. A network protector according to claim 22 wherein the resistors are 100 ohm 0.25 Watt resistors with a 10% variance.
24. A network protector comprising:
  - a first node connecting means for connecting the network protector to a first node in an electronic network;
  - a second node connecting means for connecting the network protector to a second node in the electronic network; and
  - a non-earthed surge protection circuit for allowing electronic communication between the first node connecting means and the second node connecting means, the surge protection circuit including circuit breaking means for disrupting electronic communication between the first node connecting means and the second node connecting means upon a surge exceeding a predetermined magnitude being received by the surge protection circuit.
25. A network protector according to claim 24 wherein the first node connecting means comprises a first RJ45 connector and the second node connecting means comprises a second RJ45 connector.

26. A network protector according to claim 25 wherein the surge protection circuit comprises a first leg which connects contact position three of the first RJ45 connector with contact position three of the second RJ45 connector, a second leg which connects contact position four of the first RJ45 connector with contact position four of the second RJ45 connector, a third leg which connects contact position five of the first RJ45 connector with contact position five of the second RJ45 connector as well as a fourth leg which connects contact position six of the first RJ45 connector with contact position six of the second RJ45 connector.
27. A network protector according to claim 26 wherein the first node is a telecommunications line and the second node is a 2 megabyte link.
28. A network protector according to either claim 26 or claim 27 wherein the surge protection circuit includes that the first and fourth legs are connected with a leg having a resistor.
29. A network protector according to any one of claims 26 to 28 wherein the surge protection circuit includes that the second and third legs are connected with a leg having a resistor.
30. A network protector according to claim 25 wherein the surge protection circuit comprises a first leg which connects contact position three of the first RJ45 connector with contact position three of the second RJ45 connector, a second leg which connects contact position four of the first RJ45 connector with contact position four of the second RJ45 connector, a third leg which connects contact position five of the first RJ45 connector with contact position five of the second RJ45 connector as well as a fourth leg which connects contact position six of the first RJ45 connector with contact position six of the second RJ45 connector.

31. A network protector according to claim 30 wherein the first node is a PABX line and the second node is a digital port.
32. A network protector according to either claim 30 or claim 31 wherein each leg includes a circuit breaking means which will be destroyed upon receiving an electrical surge exceeding a predetermined value thereby disrupting any electronic communication between the node and the hub.
33. A network protector according to claim 32 wherein the circuit breaking means are resistors.
34. A network protector according to claim 33 wherein the resistors are 100 ohm 0.25 Watt resistors with a 10% variance.
35. A network comprising a node, a hub, network wiring providing electronic communication between the node and the hub and a network protector connected between the hub and the network wiring, the network protector comprising:
  - node connecting means for connecting the network wiring to the network protector;
  - hub connecting means for connecting the network protector to the hub; and
  - a non-earthed surge protection circuit for allowing electronic communication between the node connecting means and the hub connecting means, the surge protection circuit including circuit breaking means for disrupting electronic communication between the node connecting means and the hub connecting means upon a surge exceeding a predetermined magnitude being received by the surge protection circuit.

36. A network comprising a first node, a second node and a network protector connected between the first node and the second node, the network protector comprising:
- a first node connecting means for connecting the first node to the network protector;
  - a second node connecting means for connecting the second node to the network protector; and
  - a non-earthed surge protection circuit for allowing electronic communication between the first node connecting means and the second node connecting means, the surge protection circuit including circuit breaking means for disrupting electronic communication between the first node connecting means and the second node connecting means upon a surge exceeding a predetermined magnitude being received by the surge protection circuit.
37. A method of protecting a network comprising the step of providing a network protector between a node in the network and a hub of the network, the network protector including a non-earthed surge protection circuit having circuit breaking means which disrupts electronic communication between the hub and the node upon the network protector receiving an electrical surge exceeding a predetermined magnitude.
38. A network protector substantially as herein described with reference to the illustrated embodiments.
39. A network substantially as herein described with reference to the illustrated embodiments.